

# Coeur d'Alene Basin ROD Amendment

August 2012

## Site Update

### Inside

- Which Parts of the River Basin are included in the RODA? .....2
- An Interim Remedy .....2
- Goals and Benefits of the Cleanup..3
- Response to Public Concerns .....3
- A Collaborative Effort, Community Participation.....4
- Highlights of the Upper Basin Cleanup Plan .....4
- Remedy Protection and Remedial Actions.....7
- Putting the RODA into Action: The Implementation Plan.....9

### EPA Issues Cleanup Plan for Upper Basin

The final version of the cleanup plan for the Upper Coeur d'Alene River Basin is now available. The cleanup plan is called an Interim Record of Decision Amendment, or RODA. In response to public comments, EPA reduced the scope of the RODA from the Proposed Plan issued in July 2010. The cleanup is now estimated to cost about \$635 million. The cleanup timeframe has been shortened to about 30 years.

The RODA lays out an ambitious plan to reduce risks to people's health and the environment from heavy metals. In short, the cleanup will:

- Improve surface water and groundwater quality
- Protect earlier cleanup work from recontamination
- Clean up contamination sources, and
- Help prevent contamination from moving downstream

### What is a RODA?

A RODA, or Record of Decision of Amendment, spells out fundamental changes to a cleanup plan. It does not cancel previous decisions. An amendment reflects new information gathered as the cleanup progresses. It also sets priorities, based on cleanup goals and public input.

This RODA spells out the selected remedy for surface water and for soil, sediments, and source materials where cleanup actions are taken in the Upper Basin. It also includes actions to protect the cleanup work we have done under past RODs.

This RODA is being done for several reasons, including:

- New data gathered since 2002 and lessons learned from completed remedies helped develop a more protective cleanup plan.

*Protecting human health remains EPA's highest priority. Cleanup of yards and other properties continues under past cleanup decisions.*

- Even though EPA and its partners have made great progress on the cleanup, serious risks from contamination still exist.
- EPA's mission is to protect human health and the environment. We are committed to meeting this responsibility.
- The National Academy of Sciences made several recommendations for the cleanup in its 2005 report. The RODA is intended to address some of those recommendations.

## Which Parts of the River Basin are included in the RODA?

The RODA addresses contamination along the South Fork of the Coeur d'Alene River and its tributaries downstream to where they combine with the North Fork. It also includes the town of Kingston and the 21-square-mile Bunker Hill "Box" where EPA began cleanup work in the 1980s.

The entire Coeur d'Alene River Basin to the Spokane River was addressed in a 2002 Record of Decision. This amendment to that ROD describes the cleanup work that will take place in the Upper Basin.

### Timeline of Site Decisions

**1991 Record of Decision**

Populated Areas in the Box

**1992 Record of Decision**

Non-Populated Areas in the Box

**2002 Record of Decision**

Entire River Basin to Spokane River

**→ 2012 ROD Amendment**

South Fork & Tributaries of Coeur d'Alene River to North Fork, Kingston, Box

*Future decision documents will further address cleanup needs in the Lower Basin*

## The RODA as an Interim Remedy

*The scaled-back cleanup focuses on the biggest sources of contamination. It will not address as much contamination in the Upper Basin as proposed in the 2010 cleanup plan. With its scope reduced, the cleanup is considered an "interim remedy."*

*The interim remedy may not meet all of the cleanup standards. In that case, EPA would be required to revise the plan again later to add more cleanup work or waive the standards, and take public comment.*

## Goals and Benefits of the Cleanup

The cleanup actions described in the RODA will help local communities, wildlife, and ecosystems by:

- Reducing health risks to people from contaminated soil, sediments, source materials, and surface water.
- Protecting plants and animals from the effects of heavy metals.
- Improving water quality in the South Fork and its tributaries.
- Improving the health of local fisheries.
- Reducing the amount of contamination flowing downstream into the Lower Basin.
- Protecting public health by keeping clean areas clean by preventing erosion and recontamination.

## Response to Public Concerns

EPA responded to over 6,700 comments from about 1,000 commenters on the Proposed Plan. The extended comment period ran from July 12, 2010, to November 23, 2010. After careful consideration of all the comments, we responded to each comment in a document called the Response to Comments.

EPA also prepared a Responsiveness Summary which summarizes EPA's responses to general categories of comments. We heard from people who were in support of and against the plan, and from people who wanted parts of the plan to change.

We believe the RODA addresses many citizen concerns while still meeting EPA's mission to protect people's health and the local ecosystem. Some major changes are noted below.

- In response to widespread public request, EPA has changed the scope of the RODA. The cleanup's cost has been reduced by nearly half, to about \$635 million. The cleanup's projected time frame has been reduced to about 30 years.
- In response to public concern about the cost of the cleanup and technical challenges, EPA removed construction of a river liner from the cleanup plan. This reduced the cost of the plan by nearly \$300 million. To address contamination seeping into the river in the Osburn and Kellogg areas, we will instead collect and treat groundwater from those areas.
- Many public comments asked EPA to reduce the number of mine and mill sites slated for cleanup.

- EPA agrees that it makes sense to focus on the highest priority sites with the greatest potential impact on water quality. EPA has reduced the number of sites to be cleaned up from 345 to 145. Sites removed from the cleanup list are:
  - Active facilities that can be addressed by other regulatory authorities,
  - Locations where prior actions were taken and can be addressed by operation and maintenance and follow-up actions,
  - Locations determined to be lower priority based on several criteria, and/or
  - Locations where 2011 data showed no action was necessary.
- Many commenters expressed concern that EPA's cleanup work might interfere with mining activities. EPA has clarified that it will continue to coordinate investigation, design, and cleanup of historic contamination with property owners in areas that are currently being mined, developed, or expanded. EPA believes mining and environmental protection can happen at the same time. Mining is an important part of the Silver Valley's history and future, and EPA is committed to doing the cleanup in a way that minimizes disruption to mining activities.

You can find the Responsiveness Summary and responses to individual comments at EPA's RODA web site: <http://go.usa.gov/igD> or <http://yosemite.epa.gov/r10/cleanup.nsf/sites/bh+rod+amendment>

## A Collaborative Effort, Community Participation

Community participation and input played a big role in developing the proposed cleanup plan. It also significantly helped shape the final version of the cleanup plan. The project covers a large geographic area with a rich mining history. The area includes unique communities with diverse interests and points of view.

Recognizing this, the agency made efforts to involve a wide range of interested parties. We worked closely with the Basin Commission and its subgroups, in particular the Upper Basin Project Focus Team. We met often with local

officials and organizations, attended community meetings, and participated in Town Halls. We held informal open houses, hosted a public tour, and held a formal public meeting.

We also published articles, sent out informational materials, and maintained a site web page. Although we are no longer accepting comments on the RODA, we look forward to ongoing input from the community and key stakeholders as the cleanup proceeds. Your involvement and ideas can help shape the implementation of the cleanup as work on the ground moves forward.

## Highlights of the Upper Basin Cleanup Plan

### Remedial Actions (also called cleanup actions)

In the Upper Basin outside the box:

- Excavation and consolidation of waste rock, tailings, and floodplain sediments;
- Capping, regrading, and revegetation of tailings and waste rock areas;
- Collection and treatment of contaminated adit discharges, seeps, and groundwater;
- Stream and streamside stabilization actions in watersheds where sediment removal occurs;
- Expansions and upgrades of the Central Treatment Plant (CTP) to treat water collected from the Basin that meets discharge standards; and
- Continued implementation of the Institutional Controls Program (ICP) by the Panhandle Health District to protect human health.

### See maps on next two pages

*Figure 12-1 shows where cleanup actions will take place to control sources of contamination*



*Figure 12-9 shows where contaminated water will be collected and treated*

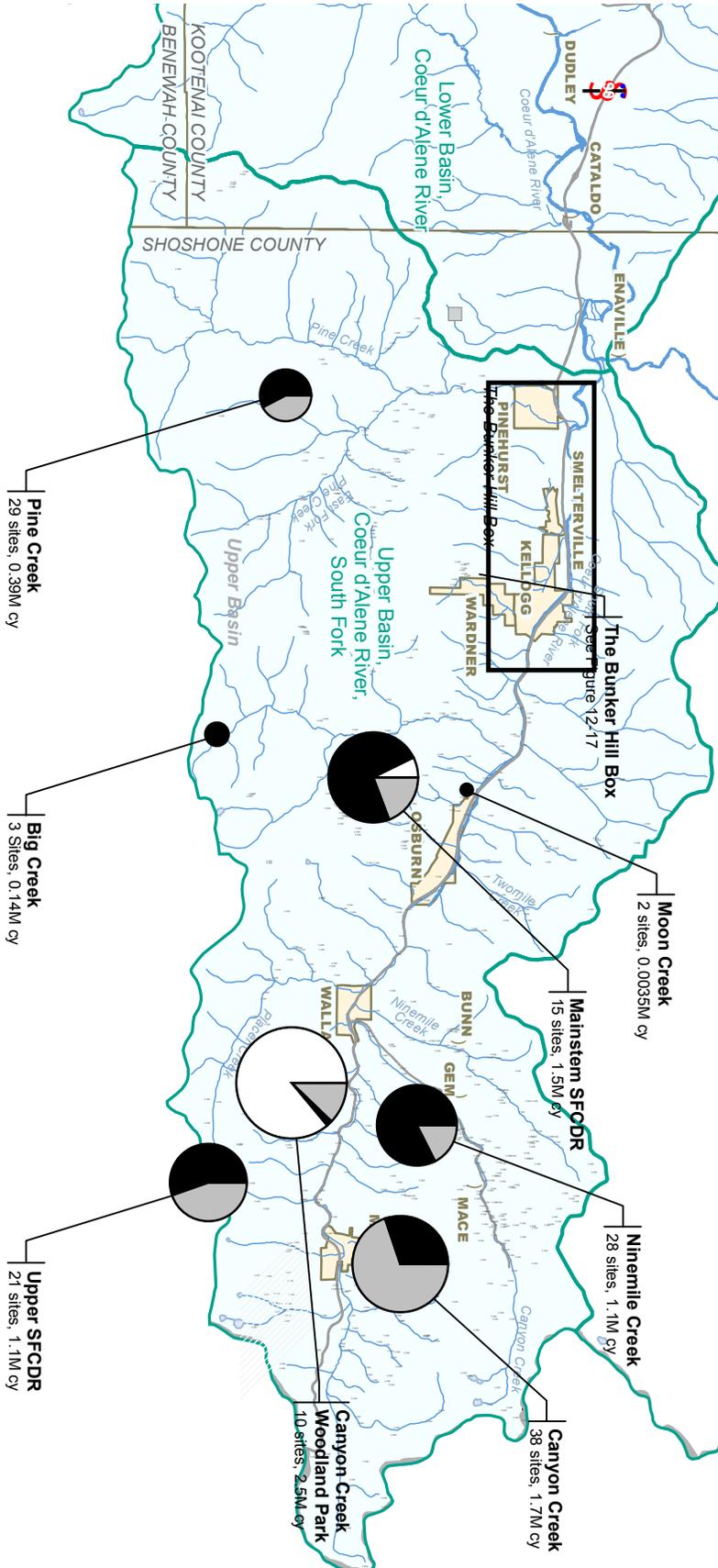


# Source Control Actions

## WHAT THIS FIGURE SHOWS

For the main and upper parts of the South Fork Coeur d'Alene River and major creeks, this figure shows the number of individual locations where remedial actions have been planned and the amount of material, such as contaminated tailings, waste rock, and floodplain sediments, that would be cleaned up. The "pie charts" for each portion of the river and creeks show the general breakdown by type of remedial action for the Selected Remedy. The volume (cubic yards) listed for each watershed includes all material addressed by the Selected Remedy.

The bigger the pie chart, the more contaminated materials are planned to be addressed. **Cap** – Includes engineered or soil covers, or regrading and planting. **Excavation** – Includes removing materials and either consolidating locally or transporting to a separate repository. **Hydraulic Isolation** – Includes preventing contaminated water (seeps, adit drainage, or groundwater) from entering the river and creeks.

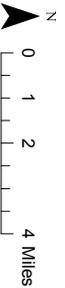


**Key to Pie Charts**

Source Control Actions:

- Cap
- Excavation
- Hydraulic Isolation

**Notes:**  
 SFCDR = South Fork Coeur d'Alene River  
 Some source control actions may not be visible in some pie charts because of their proportionally small size.



**Figure 12-1**  
**Selected Remedy: Source Control**  
**Actions by Watershed in the Upper Basin**  
 Record of Decision (ROD) Amendment  
 Upper Basin of the Coeur d'Alene River  
 Bunker Hill Superfund Site

# Water Collection and Treatment

See text on Page 4

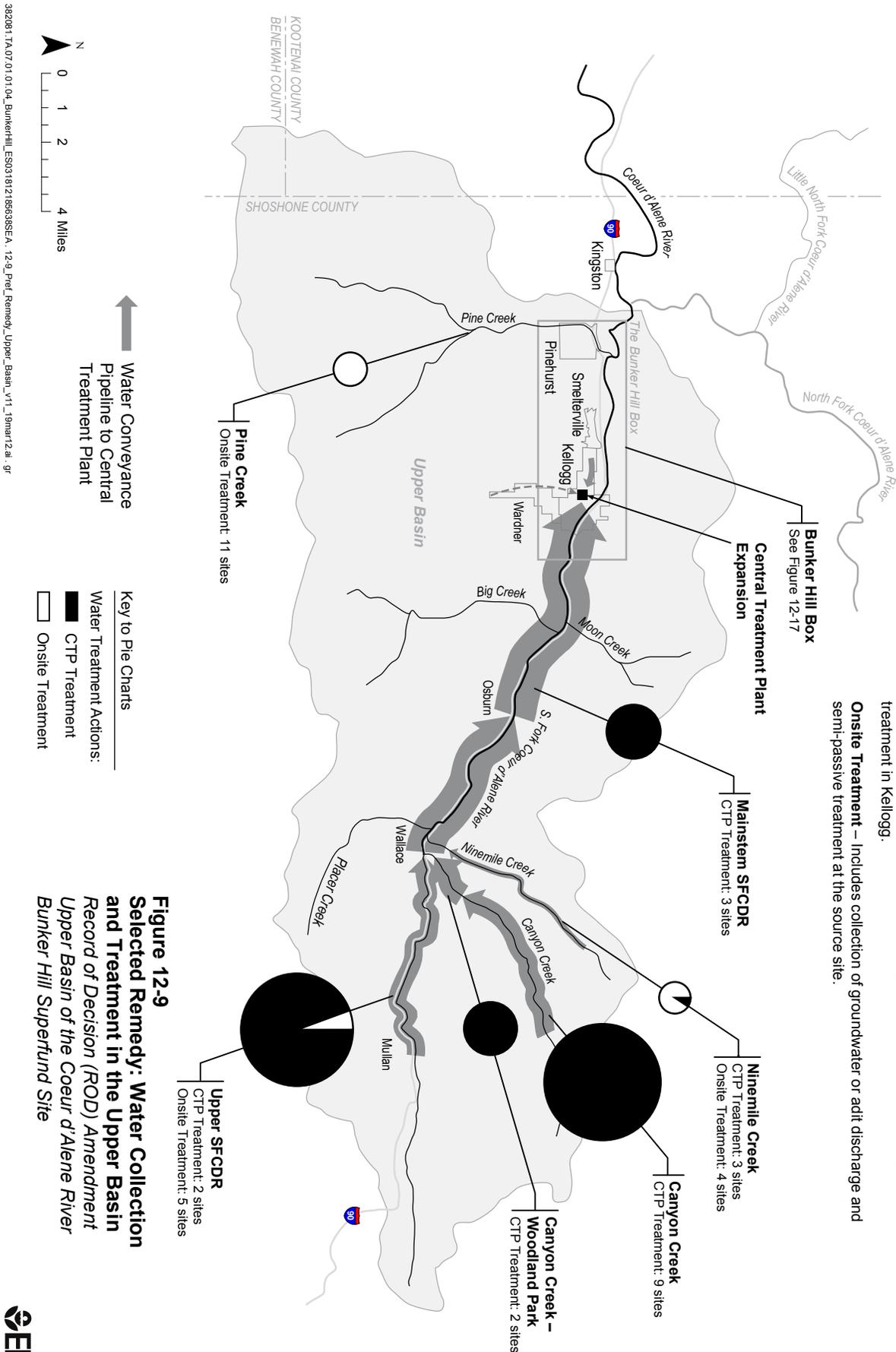
### WHAT THIS FIGURE SHOWS

For the main and upper parts of the South Fork Coeur d'Alene River and major creeks, this figure shows the number of individual locations where water treatment remedial actions have been planned. The "pie charts" for each portion of the river and creeks show the general breakdown by type of water treatment action for the Selected Remedy.

The bigger the pie chart, the larger the flow of contaminated water that will be treated by the Selected Remedy. This figure also shows the approximate location of the water conveyance pipeline to the Central Treatment Plant in Kellogg. The size of the arrow represents the approximate amount of flow for the pipeline.

**CTP Treatment** – Includes collection of groundwater or adit discharge and active water treatment in Kellogg.

**Onsite Treatment** – Includes collection of groundwater or adit discharge and semi-passive treatment at the source site.



## Highlights of the Upper Basin Cleanup Plan

### Remedial Actions

In the Bunker Hill Box:

- Reduce the flow of contaminated groundwater to the river and Government Creek;
- Piping of clean, treated water from the CTP in Kellogg directly to the river to prevent it from being recontaminated by underground soil in the Box;
- Collection and treatment of groundwater, and water management actions to reduce the flow of contaminated discharges near the Reed and Russell Adits;
- Expansion and upgrade of the CTP to provide treatment of collected water from the Box that meets discharge standards; and
- Continued implementation of the ICP, administered by the Panhandle Health District, to protect human health.

**See map on next page**

*Figure 12-17 shows what cleanup work will occur in the Box*



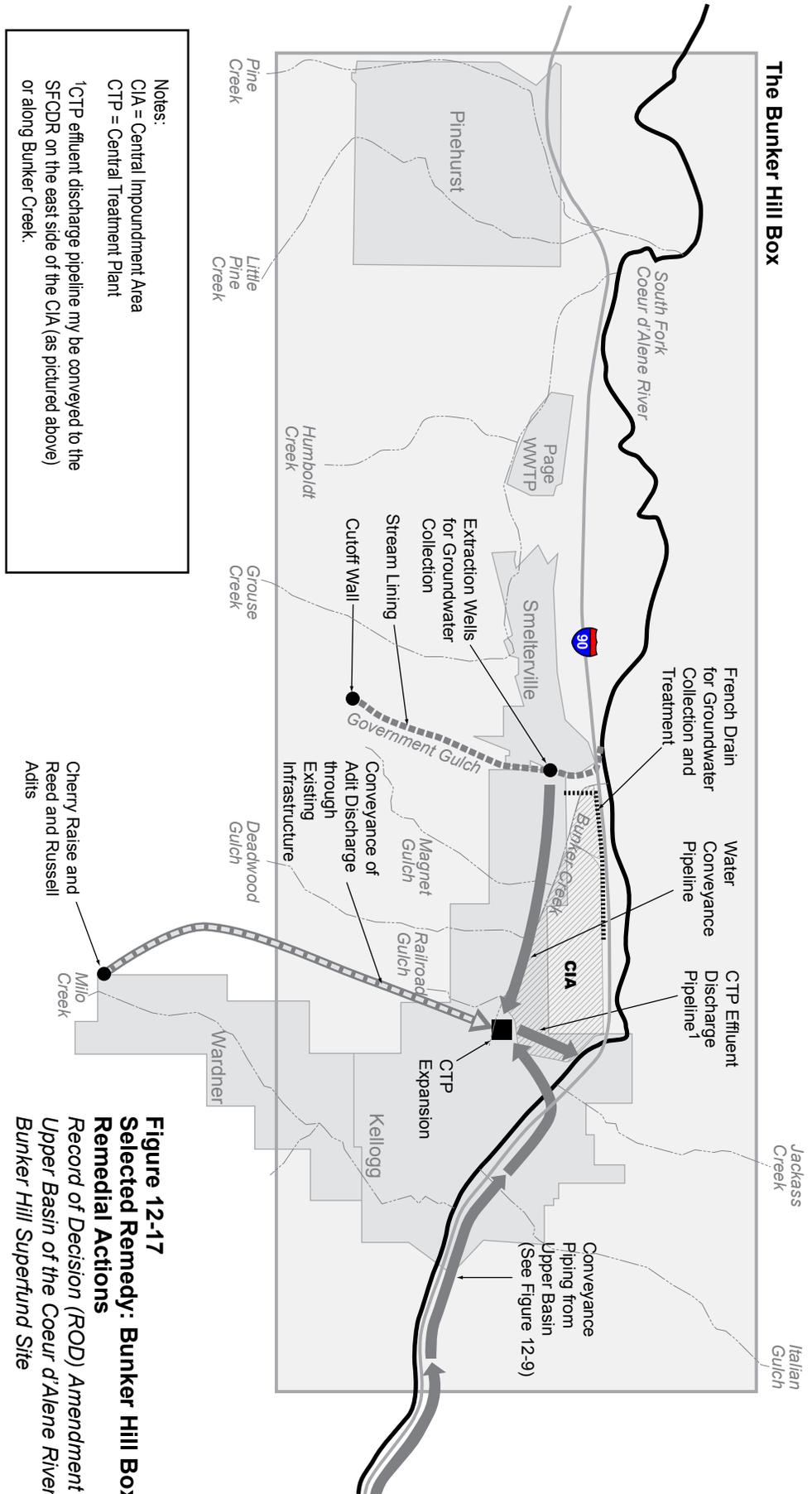
### Remedy Protection Remedial Actions (actions designed to keep cleaned up areas clean)

Remedy protection actions include:

- Specific actions, such as culvert replacements, channel improvements, diversion structures, and asphalt ditches, identified in the Upper Basin communities of Pinehurst, Smelterville, Kellogg, Wardner, Osburn, Silverton, Wallace, and Mullan
- Identification of similar generalized remedy protection actions that are expected to be needed in Upper Basin side gulches (residential areas outside the listed communities).

# Selected Remedy: Bunker Hill Box Remedial Action

↪ See text on previous page



**Figure 12-17**  
**Selected Remedy: Bunker Hill Box Remedial Actions**  
 Record of Decision (ROD) Amendment  
 Upper Basin of the Coeur d'Alene River  
 Bunker Hill Superfund Site



## Cleanup Costs

Action	Cost
Cleanup Actions in the Upper Basin (outside the Bunker Hill Box)	\$553 million
Cleanup Actions in the Bunker Hill Box	\$39.4 million
Cost for Sludge Disposal Cell for Water Treatment	\$7.73 million
Upper Basin Remedy Protection Actions	\$33.8 million
<b>Total Cost of Cleanup Actions</b> including long-term operation and maintenance = <b>\$635 million</b>	

## Putting the RODA into Action: The Implementation Plan

On-the-ground work under this RODA will start as soon as next spring, and design work will get started right away. A draft Implementation Plan will be available shortly for public input.

The Implementation Plan provides an overview of EPA's plan for doing cleanup actions outlined in the RODA during the next 10 years. It also provides an overall vision and strategy for setting priorities and doing the cleanup.

The Implementation Plan is a living document that will be updated annually. It will document changes to cleanup priorities and guide future decisions.

It will also form the basis for the Basin Environmental Improvement Project Commission (Basin Commission) 1 and 5 year plans.

**Adapting to new information:** The cleanup outlined in this RODA will take many years, and conditions will change over time. EPA plans to use an "adaptive management" process to make decisions along the way. This means that EPA will evaluate cleanup actions already taken to make sure that we are making progress toward our goals. These evaluations will guide future decisions.

**Public Input:** Public input will also help shape the Implementation Plan over time. Community members will have opportunities to weigh in on the ongoing planning. EPA also will continue to develop and modify the Implementation Plan working closely with state and federal agencies, the Coeur d'Alene Tribe, and others, including the Coeur d'Alene Basin Natural Resource Trustees and the Basin Commission. EPA will coordinate timing and other aspects of cleanup actions with property owners, including mine owners.

## About the Site

The Coeur d'Alene Basin has been a leading world producer of silver, lead, and zinc. Mining-related contaminants from historical practices have severely affected surface water, groundwater, soil, and sediments in large areas of the Basin.

Even though the cleanup has made great strides over the last 20 years, the Basin still contains high levels of lead, zinc, cadmium, arsenic, and other metal contaminants. These hazardous substances pose a serious risk to human health and the environment.

There are three Superfund "Operable Units" (OUs) at the Bunker Hill Superfund Site. OU 1 (Populated Areas) and OU 2 (Non-Populated Areas) are located in the Bunker Hill "Box." The Box is a 21-square-mile area around the former smelter complex. OU 3 (the Basin) includes all areas of the Coeur d'Alene Basin outside of the Box where mining-related contamination is present. OU 3 spans an area from the Idaho-Montana border to the State of Washington. The area includes communities, floodplains, lakes, rivers, and tributaries.

## For More Information

### Contacts

**Bill Adams, EPA Project Manager**

[adams.bill@epa.gov](mailto:adams.bill@epa.gov)

(206) 553-2806 • (800) 424-4372

**Anne McCauley, EPA Project Manager**

[mccauley.anne@epa.gov](mailto:mccauley.anne@epa.gov)

(206) 553-4689 • (800) 424-4372

**Andrea Lindsay,**

Community Involvement Coordinator

[lindsay.andrea@epa.gov](mailto:lindsay.andrea@epa.gov)

(206) 553-1896 • (800) 424-4372

### Web Sites

Find EPA's Upper Basin ROD

Amendment web site at:

<http://go.usa.gov/igD> or

<http://yosemite.epa.gov/r10/cleanup.nsf/sites/bh+rod+amendment>



## Documents

The Record of Decision Amendment, Responsiveness Summary, Implementation Plan, and other select documents about the cleanup will be available at:

**Molstead Library**

(Contains the Administrative Record)

1000 Garden Avenue

Coeur d'Alene, ID 83814

(208) 769-3355

**Wallace Public Library**

415 River Street

Wallace, ID 83873

(208) 752-4571

**Kellogg Public Library**

16 West Market Avenue

Kellogg, ID 83837

(208) 786-7231

**St. Maries Library**

822 W. College Avenue

St. Maries, ID 83861

(208) 245-3732

**Spokane Public Library**

906 West Main Avenue

Spokane, WA 99201

(509) 444-5336

**EPA Field Office**

1910 Northwest Blvd., Ste. 208

Coeur d'Alene, ID 83814

(208) 664-4588

**EPA Seattle Office**

Superfund Records Center

1200 Sixth Avenue

Seattle, WA 98101

(206) 553-4494 or

(800) 424-4372

*Alternative formats are available. For reasonable accommodation, please call Andrea Lindsay at (206) 553-1896*

 *TTY users, please call the Federal Relay Service at 800-877-8339.*



# **EPA Issues Coeur d'Alene Basin ROD Amendment**

## ***Look Inside for***

- ***Goals and Benefits of the Cleanup***
- ***Response to Public Concerns***
- ***Highlights of the Upper Basin Cleanup Plan***
- ***Putting RODA Into Action: Implementation Plan***